ABSTRACT

The present invention realizes a Doppler velocity detecting technique capable of performing velocity detection and analysis with a suppressed error while excellently distinguishing a clutter signal, and provides an ultrasonographic device using the technique. In a Doppler velocity detection device comprising means for transmitting/receiving pulse waves to/from a subject a plurality of times, and velocity analyzing means for analyzing a velocity of a moving reflector in the subject on the basis of a reception echo signal, the velocity analyzing means obtains a complex expansion coefficient by linearly connecting an expansion coefficient of an even-numbered degree term and an expansion coefficient of an odd-numbered degree term which is different from the even-numbered degree term by one degree, derived when reception echo time-series signals obtained by arranging reception echo signals of equal lapse time from pulse transmission times in order of the transmission times are expanded as components of a Legendre polynomial starting from the 0th degree, by using an imaginary unit as a coefficient, and obtains a signed velocity signal of a moving reflector in the subject on the basis of the ratio between the magnitude of each complex expansion coefficient and the magnitude of an interval between the complex expansion coefficients.